

***Remarks***

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 1-38 are pending in the application, with 1 and 19 being the independent claims. Claims 1, 2, 4, 5, 8, 16, 19, 20, 22, 23, 26, 34, 37, and 38 have been amended. These changes are believed to introduce no new matter, and their entry is respectfully requested. Further, the amendments to the claims are not being made to overcome the prior art rejections; if fact, the amendments broaden the scope of the claims.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

***Rejections under 35 U.S.C. §103***

**Guthrie**

In the Office Action, claims 1-14, 16, 17, 19-32, 34, and 35 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guthrie, *et al*, U.S. Patent No. 5,289,372 (Guthrie). Applicants respectfully traverse this rejection.

***Claims 1-14, 17, 19-32, and 35***

As discussed in Applicants' reply to the prior Office Action filed on May 7, 2003 and further discussed herein, Guthrie does not teach or suggest all the limitations of Applicants amended claims 1 and 19. Guthrie does not teach or suggest, as recited in Applicants' independent claims 1 and 19, "wherein the selected remote access sensor module comprises *a coverage pattern that defines a physical area* containing a plurality items with their associated tags" and "*interrogating the tags in a defined physical area*

through the corresponding selected remote access sensor module, thereby receiving information from the tags in the defined physical area." Instead, Guthrie teaches a plurality of sensors physically connected via wiring to a collector. Guthrie, col. 7, lines 59-61 (The sensors 18 connect to the collector 19 by way of a conventional 6-conductor telephone cable 24 using RJ11 connectors, 24a, for example"). Thus, because the collectors can only receive data from sensors that are physically connected thereto, the collectors taught by Guthrie do not provide a "coverage pattern" as defined in Applicants invention or as the term is well understood in the wireless community.

Furthermore, the Examiner states that, in Guthrie, each collector only polls the sensor located within its room and equates a room to a coverage pattern. Office Action, p. 11 ("each collector only polls the sensor located within its room -- its coverage pattern"). Applicants disagree with the Examiner's understanding of Guthrie. Guthrie does not teach or suggest the ability to poll each sensor located within a room. As described above, Guthrie can only poll those sensors that are physically connected to the collector. Furthermore, Guthrie does not teach or suggest polling items within a "coverage pattern that defines a specific area." At most, Guthrie teaches the ability to poll a collection of specific, predefined, points.

In addition, Guthrie does not teach a method and system "for conducting a wireless inventory of items," as recited in independent claims 1 and 19. The Examiner acknowledges that Guthrie teaches wired connections to link the tags and the collectors. Office Action, p. 3; *See also* Guthrie, col. 5, lines 37-39 ("sensors 18 are connected to the control unit 16 by way of separate data cables 24").

As discussed in Applicants' reply to the prior Office Action filed on May 7, 2003, there is no suggestion or motivation to modify Guthrie to obtain a system for and method of conducting a wireless inventory. Guthrie, in fact, teaches away from Applicants method and system for conducting a *wireless* inventory. In fact, the Examiner acknowledges that Guthrie discloses that using wireless (RF) transmissions is not suitable for Federal Government facilities or when secrecy considerations are required. Office Action, p. 3. Guthrie further discloses that highly sensitive equipment can be operationally contaminated by stray signal transmissions if RF transmissions are used. Guthrie, col. 3, lines 40-44. Nevertheless, the Examiner asserts, contrary to the very teachings of Guthrie, that it would be obvious to poll the sensors taught by Guthrie wirelessly. Office Action, p. 3. Guthrie clearly teaches that modifying the system to support RF transmissions is not appropriate in the context of the invention.

Furthermore, the modification proposed by the Examiner would render Guthrie unsatisfactory for its intended purpose. In Guthrie, a collector "sends out a load pulse" on the cable attached to each sensor. In response, each sensor loads its GETS ID number into its shift registers. The collector then sends a shift pulse to all the attached sensors. In response, each sensor transmits the first bit of its GETS ID to the collector. As a result, one bit from each sensor connected to the collector is received simultaneously at the collector. Guthrie, col. 9, lines 35-67. The collector uses its physical connections to associate each received bit with the specific sensor that transmitted the bit. If the physical connection was removed from Guthrie and replaced with a wireless connection, the collector in Guthrie would have no method of associating a received bit with a particular transmitting sensor.

As discussed in Applicants' reply to the prior Office Action filed on May 7, 2003 and further discussed herein, inappropriate hindsight was used to modify Guthrie to obtain a method and system for conducting a wireless inventory of items by using Applicants' disclosure as a template for obtaining the invention. Applicants claimed invention relates to a method and system for conducting a wireless inventory of items located in a plurality of remote access sensor module coverage patterns. Guthrie does not teach a method and system for conducting a wireless inventory, but rather a global equipment tracking system that provides configuration management information regarding the physical status of computer-related equipment. Guthrie, col. 1, lines 5-10. As described above, the computer-related equipment taught by Guthrie is physically tethered to one or more collectors. Thus, Guthrie can only determine what piece of equipment is currently connected to a wire. If a collector wire became accidentally disconnected from a piece of equipment or was cut in some way, the system of Guthrie could not inventory the piece of equipment, even though it is still a part of the system. Conducting an inventory, which implies items being flexibly removed from and/or added to an area where the inventory is being conducted, is thus illogical in the wired environment of Guthrie. The Examiner has merely used impermissible hindsight to reject the claimed invention.

For at least these reasons, independent claims 1 and 19 and their respective dependent claims 2-14 and 17, and 20-32 and 35 are patentable over Guthrie. Applicants respectfully request that the rejection of claims 1-14, 17, 19-32, and 35 be reconsidered and withdrawn.

**Claims 16 and 34**

In the Office Action dated July 1, 2003, the Examiner stated that "while the Applicant is free to express the claim in as many words as he wishes, it is the steps of the claims which are being examined, not the terminology used by the Applicant." Final Office Action, page 13, line 6-8. Applicants submit that "[a]ll words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). Therefore, Applicants respectfully disagree with the Examiner's understanding of claims 16 and 34 and thus, respectfully traverse the Examiner's rejection of claims 16 and 34.

Amended claim 16 recites among other features:

at each tag within the physical area defined by the coverage pattern of the selected remote access sensor module,

incrementing a first tag count in response to the first clock signal, and

transmitting at least a first plurality of the plurality of bits identifying the tag when the first plurality of bits of the tag corresponds to the first tag count.

Amended claim 34 recites among other features:

at each tag within the physical area defined by the coverage pattern of the selected remote access sensor module,

means for incrementing a first tag count in response to the first clock signal, and

means for transmitting at least a first plurality of the plurality of bits identifying the tag when the first plurality of bits of the tag corresponds to the first tag count.

In the Final Office Action, the Examiner summarized these claims elements (prior to the above amendments) as "each tag receives the time signal and responds with its tag ID." Final Office Action, page 13, line 9.

In Applicants' claimed invention, each tag does not respond when it receives the first clock signal. Instead, each tag increments a first tag count in response to the first clock signal and transmits a first plurality of the plurality of bits identifying the tag *only when these bits correspond to the first tag count*. Unlike Applicants' invention, in Guthrie, a collector "sends out a load pulse" on the cable attached to each sensor. Each sensor in response loads its GETS ID number into its shift registers. The collector then sends a shift pulse to all the attached sensors. In response, each sensor transmits the first bit of its GETS ID to the collector in parallel. As a result, one bit from each sensor connected to the collector is seen at the same time. Guthrie, col. 9, lines 35-67. Thus, the sensors in Guthrie do not store and increment a tag count corresponding to a first clock signal. In addition, the shift pulses used in Guthrie can be sent at any interval and therefore, cannot be considered clock signals. Furthermore, the sensors in Guthrie respond automatically with only a single bit of their GETS ID upon receipt of a shift pulse, regardless of the value of the bit to be transmitted. Thus, the sensors do not transmit their entire GETS ID in response to a single shift pulse.

Amended claim 16 further recites, among other features:

at the network tag reader,

incrementing a first reader count in response to the first clock signal,

storing a given first reader count when more than one tag responds to the first clock signal that corresponds to the given first reader count, and

transmitting through the selected remote access sensor module the given first reader count followed by a second clock signal, and at each tag wherein the first plurality of bits corresponds to the first reader count,

incrementing a second tag count in response to the second clock signal, and

transmitting at least a second plurality of the plurality of bits identifying the tag when the second plurality of the plurality of bits identifying the tag corresponds to the second count.

Amended claim 34 recites among other features:

at the network tag reader,

means for incrementing a first reader count in response to the first clock signal,

means for storing a given first reader count when more than one tag responds to the first clock signal that corresponds to the given first reader count, and

means for transmitting through the selected remote access sensor module the given first reader count followed by a second clock signal; and

at each tag wherein the first plurality of bits corresponds to the first reader count,

means for incrementing a second tag count in response to the second clock signal, and

means for transmitting at least a second plurality of the plurality of bits identifying the tag when the second plurality of the plurality of bits identifying the tag corresponds to the second count.

The Examiner summarizes these elements (prior to the above amendment) as "the reader receives the responses from the tags; increments a data store (first reader count) when there is a time slot contention; and transmits a second timer signal along with the first reader count; each responding tag receives the second signal and transmits a second number back to the reader." Office Action, p. 13. The Examiner applies this understanding of the claim elements to Guthrie and states that "each tag receives the signals and responds with the first eight bits of data

from its tag ID; the collector receives and stores this data (first reader count) then requests the next bit(s) from each tag and repeats the process until all 26 bits of each sensor ID number is read. Thus, Guthrie ... discloses all the components used in the present Claims 16 and 34." *Id.*

Applicants respectfully disagree with the Examiner's understanding of Guthrie. In Guthrie, each bit of the GETS ID of a sensor is transmitted to the collector individually, in response to the receipt of a series of 31 shift pulses. An individual sensor does not transmit the first eight bits of data from a plurality of bits identifying the sensor upon receipt of signals from a reader. In Guthrie, a collector receives one bit from eight different sensors in parallel (8 bits total). As stated by Guthrie, "these eight bits are comprised of one bit from each of the eight possible sensors." Guthrie, col. 10, lines 3-8. Furthermore, because Guthrie describes a system where each sensor is physically connected to a buffer in the collector and the collector receives bits from a plurality of sensors in parallel, the notion of a time slot contention is illogical.

Even assuming arguendo that the Examiner's understanding of Guthrie is correct, the Examiner acknowledges that in Guthrie only the "sensor ID number is read." Office Action, p. 13. Thus, by the Examiner's own admission, Guthrie does not teach the use of a first and second plurality of bits, as recited in Applicants' claims 16 and 34.

For at least these reasons, claims 16 and 34 are patentable over Guthrie. In addition, claim 16 depends from claim 1 and claim 34 depends from claim 19. Therefore, for at least the reasons described above relative to claims 1 and 19, claim 16

and 34 are patentable over Guthrie. Applicants respectfully request that the rejection of claims 16 and 34 be reconsidered and withdrawn

Guthire and Kaplan

In the Office Action, claims 15, 18, 33, and 36 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guthrie in view of Kaplan, *et al.*, U.S. Patent No. 3,689, 885 (Kaplan). Applicants respectfully traverse this rejection.

Claims 15, 18, 33 and 36 depend, respectively, from amended claims 1 and 19 and include the features recited therein. Kaplan does not overcome all of the deficiencies Guthrie relative to claims 1 and 19, described above. For at least these reasons, and further in view of their own features, claims 15, 18, 33, and 36 are patentable over the combination of Guthrie and Kaplan. Reconsideration and withdrawal of the ground of rejection is therefore respectfully requested.

Guthire and Walter

In the Office Action, claims 37 and 38 were rejected under 35 U.S.C. §103(a) as being unpatentable over Guthrie in view of Walter *et al.*, U.S. Patent No. 5,856,788 (Walter). Applicants respectfully traverse this rejection.

Claims 37 and 38 depend, respectively, from amended claims 1 and 19 and include the features recited therein. Walter does not overcome all of the deficiencies Guthrie relative to claims 1 and 19, described above. For at least these reasons, and further in view of their own features, claims 37 and 38 are patentable over the combination of Guthrie and Walter. Reconsideration and withdrawal of the ground of rejection is therefore respectfully requested.

***Conclusion***

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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